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AUTHOR Zbrzezny, Ruth A.
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ABSTRACT

A literature review focused on ways for teachers to increase students' motivation. A total of 37 annotations were organized in terms of positive and negative effects of rewards on students' motivation, the issue of whether negative effects of rewards can be manipulated to have a positive effect, and suggestions for the classroom teacher on the use of rewards to maximize learning. The literature indicated that: (1) rewards play an essential role in the classroom; (2) tangible rewards decrease intrinsic motivation; (3) rewards for highly motivated children lead to decreased motivation; (4) children begin school with a high intrinsic interest in learning; (5) ways of using rewards determine whether rewards increase or decrease intrinsic interest; (6) children's prior experience with rewards produces differing reactions to rewards; (7) timing of rewards is a central issue; (8) rewards undermine intrinsic motivation and self-esteem when they are administered by a control-oriented person; (9) praise is an effective form of reinforcement; and (10) modeling is an important method of increasing students' intrinsic motivation to learn. The report suggests that teachers should observe students carefully to know when to reward and what kind of reward to use. Recommendations for educational pracatice, a glossary, and a summary of study findings are included. (RH)

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EXIT PROJECT

Effects of Extrinsic Rewards on Intrinsic Motivation: Improving Learning in the Elementary classroom

By

Ruth A. Zbrzezny

Study directed
by
Charles R. DuVall Ph.D.

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INTRODUCTION

Educators today must deal with a wide variety of students learning styles and motivational needs. Therefore, the task of the teacher is to create a classroom condition that will provide a maximum amount of learning, and produce students who are willing to accept responsiblity for their learning. Teachers must look at all possible resources in order to encourage learning for every student. A primary goal of teachers is to develop intrinsic motivation which is significantly related to teacher orientation (Deci 1981:8).

STATEMENT OF PROBLEM

The classroom teacher is continually facing decisions on how to motivate each of her/his students. The elementary classroom contains students with a wide range of learning needs. The teacher's goal is to stimulate intrinsic motivation in each of her/his students. The problem for the teacher is to identify each student's need, and determine which, if any, extrinsic resources will enhance the student's intrinsic motivation. Teachers must be able to determine how and when to use rewards so they can create the best possible atmosphere for learning.

SIGNIFICANCE OF THE STUDY

When students have little or no desire to learn the given material, it is the task of the educator to find a means to motivate these students. Educators must recognize the wide variation in individual needs to specific kinds of drive and the effectiveness of particular reinforcing conditions (Berlyn 414). This study is a collection and evaluation of research on the uses of intrinsic motivation, extrinsic motivation, and suggestions for classroom teachers. The study was designed to provide information for the classroom teacher on how to stimulate motivation in her/his students. Guidelines are suggested for teacher use, and if implemented, will encourage students to be more intrinsically motivated.

ORGANIZATION OF THE STUDY

This study will look at different ways to increase students motivation. The study will be broken down in the following areas: 1) positive effects of rewards on students motivation in the classroom, 2) negative effects of rewards on students motivation in the classroom, 3) Can the negative effects of rewards be manipulated to have a positive effect?--factors to consider and, 4) Suggestions for the classroom teacher on the use of rewards and creating a classroom climate conducive to maximum learning.

LIMITATIONS OF THE STUDY

Researchers over the years have conducted extensive studies on student motivation. It has been, and still is a concern of educators. Time has limited any further examination of the subject. It is believed that a broad overview of the data has been evaluated.

GLOSSARY

Attribution theory--"suggests that a person will be more likely to perceive himself to be extrinsically motivated if he is provided with a salient reward for engaging in an activity." (Ross 1975:245)

Cooperative Learning--"A set of instructional methods in which students are encouraged or required to work together on academic tasks." (Slavin 1987:1161)

Extrinsic Motivation--"The use of rewards or punishments external to intrinsic interests in the material itself in the attempt to control behavior." (Good 1973:375)

Intrinsic Motivation--"Determination of behavior that is resident within an activity and that sustains it." (Good 1973:375)

Motivation--"The practical art of applying incentives and arousing interest for the purpose of causing a pupil to perform in a desired way; usually designates the act of choosing study materials of such a sort and presenting them in such a way that they appeal to the pupil's interests and cause him to attack the work at hand willingly and to complete it with sustained enthusiasm." (Good 1973:375)

Overjustification Hypothesis--"A person's intrinsic interest in an activity may be decreased by inducing him to engage in that activity as an explicit means to some extrinsic goal." (Lepper 1973:129)

Reinforcement--"A concept denoting an event that influences the probability of a response to a stimulus being produced again under similar conditions." (Good 1973:288)

Self-perception Theory--"...a person engages in processes of inference about his own behavior and its meaning." (Lepper 1973:129)

POSITIVE EFFECTS OF REWARDS

Karniol, Rachel, and Ross, Michael. "The Effect of Performance-Relevant and Performance-Irrelevant Rewards on Children's Intrinsic Motivation." Child Development 48 (June, 1977): 482-487.

This study involved fifty seven children who ranged in age from four to nine years. A series of experiments were set up to show the relationship between rewards and intrinsic motivation. The children were divided into three groups, performance-irrelevent, control and performance-relevant reward. Those in the performance-irrelevant group received a reward for participating and those in the performance-relevant group received a reward based upon their performance. The control group received no reward. The children were then given free time to play with toys or the experimental game to measure their intrinsic interest. The results showed a significant loss of intrinsic motivation in the performance-relevant group. There was no major difference in the performance-irrelevant group and in the control group. Performance-irrelevant rewards seem to enhance intrinsic motivation because it lessens the focus on failure. Intrinsic motivation is undermined by performance-relative rewards because the lack of success reduces the subjects interest.

McCullers, John, and Martin, Judith. "A Reexamination of the Role of Incentive in Children's Discrimination Learning." Child Development 42 (1971): 827-837.

This paper reports on two studies. Twenty-four fourth-grade students were used to examine twelve typical incentive objects by way of a rating scale, paired comparisons, and behavioral choice. The results of the first study showed a consistent agreement in preferences between sexes and methods. Several objects were found to have a high positive value and some a negative value. Two positive and two negative objects were chosen for experiment two. The second study involved seventy-two fourth grade students who re-evaluated four objects from the first study and then performed a learning task that manipulated: 1) the type of reinforcement, 2) correct responses or errors, and 3) instructions whether the subjects were informed of the reinforcement contingency. The study revealed that better performance was associated with high-value incentives and poorer performance with low incentives. Adult approval through verbal yeses was a strong reinforcer. The data concluded that incentive objects provide feedback to the learning process, but they also serve as a moderate source of distraction to the child's learning as well as to his motivation.

Reiss, Steven, and Sushinsky, Leonard. "Overjustification, Competing Responses, and the Acquisition of Intrinsic Interest." Journal of Personality and Social Psychology 31 (1975): 1116-1125.

This study was designed to test the overjustification hypothesis. That is, expected rewards in an activity causes a lowered interest in the activity when the reward is no longer available. Two experiments using thirty-two first-grade girls in a song listening activity, were conducted. Experiment one's primary purpose was to duplicate Lepper's findings for the overjustification hypothesis. It found that the children in the reward condition listened significantly less to the songs than the no-reward condition group, which supported Lepper's findings. Experiment 2 was set up the same as experiment 1, except that tokens were added to serve as rewards, and only nine children were involved. This experiment was designed to test the overjustification effect following termination of the tokens. Additional post tests were given two days later. The results showed that when multiple-trial, contingent reinforcement procedures were provided, the decrease in interest did not occur. It is concluded that the overjustification hypothesis is too vague for scientific purposes.

Roserfield, David, Folger, Robert, Adelman, Harold. "When Rewards Reflect Competence: A Qualification of the Overjustification Effect." Journal of Personality and Social Psychology 39 (1988): 368-376.

The authors in this article examine two ideas of extrinsic rewards that can effect whether such rewards will reduce intrinsic interest. 1) Feedback regarding one's level of competency and 2) the nature of the contingency between work on the task and the level of reward received as compensation. The subjects were one hundred psychology students who were divided into four different types of feedback conditions: 1) contingent on competency feedback (earnings based on the number of work units completed), 2) contingent no-feedback (rate of pay determined by ability, 3) noncontingent no-feedback (flat rate given regardless of productivity or ability), and 4) no-pay competency-feedback (no pay, only information about ability given). The results revealed that when subjects thought their pay was based on their competence, they were more motivated to work. In the other conditions, where the pay did not reflect the subjects ability, it was found a lack of interest to work in the future on the task.

Workman, Edward A., and Williams, Robert L. "Effects of Extrinsic Rewards on Intrinsic Motivation in the Classroom." Journal of School Psychology 18 (Summer 1980): 141-147.

This paper examines the effects of extrinsic rewards on intrinsic reinforcement from academic activities. It also examines the justification of using rewards in the classroom and the long term effects of extrinsic rewards on intrinsic interest in classroom activities. Ten studies were used to examine the following categories of target behavior: 1) on-task behavior, 2) social interaction behaviors and 3) disruptive behaviors. The studies used for this review had the following criteria: a) external reward procedures are clearly shown to be functionally related to changes in target behaviors; b) target behaviors were regular dimensions of classroom performance as opposed to being a response that would typically occur only in a laboratory setting; c) follow-up periods involved the use of direct behavioral observations of target behavior; d) observations of target behaviors were taken in the classroom setting; e) systematic extrinsic reinforcement was absent during the follow-up periods. The results of the follow-up studies suggest that a combination of praise and tangible rewards in the classroom can produce and maintain intrinsic interest in the behaviors for which external rewards are given.

NEGATIVE EFFECTS OF REWARDS

Danner, Fred W., and Lonky, Edward. "A Cognitive-Developmental Approach to the Effects of Rewards on Intrinsic Motivation." Child Development 52 (Sept. 1981): 1043-52.

Danner and Lonky set up two studies to test the theory that intrinsic motivation depends on the match between cognitive level and task demands and to assess the effects of extrinsic rewards and praise on levels of intrinsic motivation. Ninety children from kindergarten to fourth grade were used. The results of the first experiment concludes that the children appeared to be intrinsically motivated to take part in tasks within their reach, but developmentally just beyond their current level. The second experiment used the same group of children and examined the effects of rewards and praise. The results showed that the highly motivated group showed a decrease in interest following rewards, while the less highly motivated children suffered no effects. The effects of verbal praise were similar to those of extrinsic rewards, but not as strong. In conclusion, the study suggests that at least part of the teacher's problem of matching tasks to children can be solved by providing more choices for children. Teachers also need to limit their use of external reinforcers to those who will benefit from their use the most.

Deci, Edward L. "Effects of Externally Mediated Rewards on Intrinsic Motivation." Journal of Personality and Social Psychology 18 (April, 1971): 105-115.

Deci set up and conducted two laboratory experiments and one field experiment to investigate the effects of external rewards on intrinsic motivation to perform an activity. Twenty-four college students participated in several sets of sessions. Money and social approval were used as rewards to acquire the desired behavior. The experimental results show that money decreased intrinsic motivation for the activity following the experience. It was also suggested that when verbal reinforcement and positive feedback were used as the external rewards, the subjects intrinsic motivation seemed to increase. The cause for this seemed to be that these forms of rewards were not perceived as controlling mechanisms.

Dollinger, Stephen J., and Thelen, Mark H. "Overjustification and Children's Intrinsic Motivation: Comparative Effects of Four Rewards." Journal of Personality and Social Psychology 36 (Nov. 1978): 1259-69.

This study dealt with the question of the overjustification effects of four types of rewards on children's intrinsic motivation. Sixty preschool and elementary school children were used to examine the use of tangible, verbal, symbolic and self-administered symbolic rewards. All children were made aware of their rewards. The results of the study showed tangible and self-rewards resulted in less intrinsic motivation for the rewarded activity than verbal and symbolic rewards. The verbal and symbolic reward groups did not differ from the control group. In conclusion, this study supported the suggestion that performance-relevant rewards are less detrimental than the performance-irrelevant rewards. It was indicated that further studies need to be done to investigate the type of reward and the age of the subject effecting the subsequent intrinsic motivation. It was further suggested that teachers should not attempt to shift from the use of extrinsic to intrinsic rewards, but rather use the rewards that are optimal for a given child's developmental level.

Green, David, and Lepper, Mark R. "Effects of Extrinsic Rewards on Children's Subsequent Intrinsic Interest." Child Development 45 (1974): 1141-1145.

This study was designed to determine the possible side effects of the use of tangible extrinsic rewards on children's intrinsic interest. Seventy-three preschool children were chosen, ranging in age from 3.8 to 4.9 years, for this study. The experiment was set up exactly like those done by Lepper in 1973. Drawing freely with a felt-tip marker served as the activity. Greene and Leeper used a control group, an expected reward group and an un-expected reward group for the experiments. The results of this study provided a near identical replica of Leppers earlier study. That is, those who expected and received a reward for taking part in the activity showed significantly less intrinsic interest in the activity than those who engaged in the activity without expecting an intrinsic reward. It was suggested that there is a need to examine the potential long-term consequences of the extrinsic reward system.

Harter, Susan. "Pleasure Derived from Challenge and the Effects, of Receiving Grades on Children's Difficulty Level Choices." Child Development 49 (1978): 788-799.

Harter examined the hypotheses that children derive maximum pleasure from optimally challenging tasks. The study involved forty sixth graders. They were divided into two groups, games and grades. Four difficulty levels of anagrams were used, 3,4,5,and 6 letter anagrams. Both groups were allowed free choice of the difficulty level. Only the grade group was given a letter grade for the number of anagrams completed. In each phase of the experiment two measures were recorded, solution time and smiling (a sign of enjoyment). The additional measures were taken from each subject, a difficult rating and a subjective competence rating. Children in the grades condition rated the anagrams more difficult than those in the games condition. The results showed that those in the grades condition chose the easier anagrams than those in the game condition. Less pleasure was also reflected by those in the grade group. The majority of the children in the games condition stated that they would have chosen the easier anagrams if they had been receiving a grade. These findings are consistent with other studies that, "One feature of the intrinsic motivational system is to seek out challenge if given a choice" (797).

Kruglanski, Arie W. Friedman, Irith, Zeevi, Gabriella. "The Effects of Extrinsic Incentive on some Qualitative Aspects of Task Performance." Journal of Personality 39 (1971): 606-617.

This study was conducted to examine the extrinsic-intrinsic conditions on a variety of tasks. Thirty-two fifteen to sixteen year old subjects participated in two experimental groups. These two groups were referred to as the No-Incentive and the Extrinsic-Incentive groups. They were evaluated on creativity, task recall, and task enjoyment. In conclusion, the no-incentive condition group showed superiority in creativity of performance and task recall. They also reported a greater enjoyment of the experiment. The information collected was also discussed with reference to the idea that the degree of intrinsic motivation for a task is determined by one's own self.

Kruglanski, Arie W., et al. "Effects of Task-Intrinsic Rewards upon Extrinsic and Intrinsic Motivation." Journal of Personality and Social Psychology 31 (1975): 699-705.

This report contained three experiments designed to test the relationship between the extent of task intrinsic rewards and the degree of intrinsic and extrinsic motivation. Forty students from grades 6 and 7 were used for experiment one. Experiment two and three used forty undergraduate students. In all three experiments one half of the subjects were given high intrinsic reward conditions and one half were given low intrinsic conditions. In each experiment subjects in the high intrinsic reward condition spent more time on the activity, volunteered more often for the activity and, exhibited a higher degree of intrinsic motivation as compared with the subjects of the low intrinsic reward conditions. The results provided strong support for the hypotheses that a.) the extent of intrinsic motivation varies positively and b.) the extent of extrinsic motivation varies negatively with the extent of task-intrinsic rewards.

Lepper, Mark R., Greene, David, and Nisbett. Richard E. "Undermining Children's Intrinsic Interest with Extrinsic Rewards: A Test of the "Overjustification" Hypothesis." Journal of Personality and Social Psychology 28 (Oct. 1973): 129-137.

Preschool children ranging from 40 to 64 months in age were used in conducting this study. They were selected because of their interest in drawing with colored felt-tipped markers. The activity was chosen because it meet the following three criteria: 1) sufficient similarity to other activities so as not to appear out of place, 2) sufficient attractiveness to ensure that most children would express initial interest, and 3) relatively easy to measure objectively the childrens interest. Children were placed in one of three groups. The control group received no rewards, the unexpected-reward group who had no prior knowledge of a reward, and the expected reward group, who received a reward for agreeing to participate. The results of this study showed that the children in the expected-reward group later showed a lower intrinsic interest in the activity than the other two groups desplayed. Lepper recommends that the use of tokens be limited to circumstances when the initial interest is low--only when necessary.

Lepper, Mark R., and Greene, David. "Turning Play into Work: Effects of Adult Surveillance and Extrinsic Rewards on Children's Intrinsic Motivation." Journal of Personality and Social Psychology 31 (March, 1975): 479-486.

Eighty preschool children ranging in ages from four to five years old were used in this study. This study had two major purposes: 1) to extend the generalities of the conclusions of earlier studies on the effects of extrinsic rewards on intrinsic interest by duplicating the results with an experimental activity and extrinsic rewards quite different from what was previously used, and 2) to also examine the effects of adult surveillance during the experiment on the intrinsic interest in the activiety. The results of this study replicate previous research in that extrinsic incentives may undermine children's intrinsic interest in an activity. Adult surveillance acted as extrinsic pressure so therefore those who had been placed under surveillance showed less interest in the activity than those not monitored.

Pearlman, Charles. "The Effects of Level of Effectance Motivation, IQ, and a Penalty/Reward Contingency on the Choice of Problem Difficulty." Child Development 55 (1984): 537-542.

This study was designed to measure the effectance motivation of six hundred and twenty-four sixth graders. They were assessed by using two instruments completed by the teacher. An observation of student choices of hard or easy problems was made after they were informed of the contingencies. One half of the group had contingencies and the other half did not. Students with a higher effectance chose harder problems than those with a lower effectance. IQ was the best predictor of the students choice. School grades and token rewards were also discussed. Pearlman states that rewards can be useful for some behavior, but usually they adversely effect behavior and interest. He stated that children begin with intrinsic motivation, but shift to a more extrinsic orientation as they become older.

CAN NEGATIVE EFFECTS OF REWARDS BE MANIPULATED TO HAVE A POSITIVE EFFECT?
FACTORS TO CONSIDER

Barnes, Donald L. "The Use of Incentives and Rewards in Elementary Classrooms." Teacher-Educator 23 (Winter, 1987-88): 11-16.

According to Barnes, students responded favorably to reward systems when: 1) the pupil felt there was a reasonable chance of success, 2) the pupil was convinced that the personal risks were not overwhelming, 3) the pupil believed that the product or reward was worth the effort needed to succeed. Barnes also believed that the use of group rewards significantly improved classroom noise, inappropriate talking and out-of-seat behavior. Group rewards had two primary effects, 1) they created pressure among group members that, in turn, spured group productivity, 2) they promoted the sharing of resources when feasible and easily accomplished. Rewards were not without the following flaws: 1) rewarding students for participating in intrinsically interesting tasks reduced their natural desire for these activities, 2) when highly appealing rewards were offered, children choose the less challenging tasks, and 3) rewards served as intellectual and social constraints.

Bates, John A. "Extrinsic Reward and Intrinsic Motivation: A Review with Implications for the Classroom." Review of Educational Research 49 (Fall, 1979): 557-576.

This article was an extensive review of research from four perspectives: self-perception theory, personal causation, overjustification hypothesis and behavioral contrast. The studies consisted of a variety of reward conditions which were compared and the inadequacies were pointed out. The majority of the studies found that intrinsic interest was decreased when extrinsic rewards were used. A few studies found just the opposite effect, but Bates concluded that generally extrinsic rewards were detrimental to intrinsic motivation. He also generalized that praise enhanced intrinsic motivation when it was related directly to the task. Bates also suggested that one should question the use of reinforcers when long-term maintenance of behavior is critical.

Butler, Ruth and Nisan, Mordecai. "Effects of No Feedback, Task-Related Comments, and Grades on Intrinsic Motivation and Performance." Journal-of-Educational-Psychology 78 (June, 1986): 210-216.

Nine classes comprising of twenty-six sixth grade pupils were assigned to one of three feedback conditions, no feedback, task-related comments, and grades. The hypothesis tested was that intrinsic motivation would be maintained after receiving non-threatening, task-related evaluation and it would be undermined after receiving no feedback or controlling normative grades. The hypothesis was confirmed after an assessment was made of their success. 50% of pupils who received no feedback would rather have received a grade. However, 78.9% of pupils who received a grade would have preferred written comments. 86.3% of those who received written comments were satisfied. Thus, most pupils preferred constructive information over grades.

Calder, Bobby J., and Staw, Barry M. "Self-Perception of Intrinsic and Extrinsic Motivation." Journal of Personality and Social Psychology 31 (1975): 599-604.

The purpose of this study was to test the interaction hypothesis of intrinsic and extrinsic motivation by manipulating both the intrinsic and extrinsic factors as independent variables. A measurement of their effects on dependent variables was taken. All past studies have introduced an extrinsic reward to an interesting activity and a dependent variable measured the intrinsic motivation. The interaction hypothesis predicted two effects: 1) an inverse effect when a task is initially high in intrinsic interest, and, 2) a direct effect when there is less interest in the activity. Forty undergraduate students participated in the experiment of working blank puzzles and picture puzzles. Some received monetary rewards, and some received no reward. The results showed that under some conditions self-perception may produce an interaction between intrinsic and extrinsic motivation. The study concluded that more research is needed in this area.

Condry, John. "Enemies of Exploration: Self-Initiated Versus Other-Initiated Learning." Journal of Personality and Social Psychology 35 (July, 1977): 459-475.

This paper reviewed many different studies on the effect of task-extrinsic incentives used with motivated activities. Several types of rewards were reviewed. The main finding of this study was that when a reward was offered before attempting the task, it lowered the interest in the task and also lowered the quality of performance on the task. Evidence was provided that task-extrinsic rewards when used to motivate an activity or learning process, revealed possible undesirable effects. Subjects who were offered the task-extrinsic incentive chose easier tasks, were less efficient, and tended to be more illogical in their problem-solving strategies. They were also less likely to return to a task that they were once rewarded for doing. Condry suggests that the use of unexpected rewards, or no rewards, showed an increase in interest following an activity. We must begin to look at the "natural process of self-involvement" (474).

Deci, Edward L., Nezlek, John, and Sheinman, Louise. "Characteristics of the Rewarder and Intrinsic Motivation of the Rewardee." Journal of Personality and Social Psychology 40 (1981): 1-10.

A field study was conducted on the relationship between teacher characteristics and the intrinsic motivation and self-esteem of children in grades four through six. The research came from Deci's cognitive evaluation theory, which distinguishes between informational and controlling aspects of rewards. The children completed three measures; 1) intrinsic vs. extrinsic orientation in the classroom and perceived competence measures, 2) classroom climate questionnaire, and 3) teachers' control vs. autonomy orientation. In summary this study showed a valid relationship between characteristics of the rewarder and intrinsic motivation. It also suggested that rewards undermine intrinsic motivation and self-esteem when administered by teachers with controlling orientation, but is maintained if administered by an autonomy oriented teacher.

Enzle, Michael E., and Ross, June M. "Increasing and Decreasing Intrinsic Interest with Contingent Rewards: A Test of Cognitive Evaluation Theory." Journal of Experimental Social Psychology 14 (1978): 588-597.

The purpose of this study was to examine Deci's studies regarding the effects of contingent rewards on intrinsic task interest. Seventy-two undergraduate students were given a series of puzzles and either a high or low reward condition. Evidence showed that contingent rewards may either decrease or increase intrinsic interest depending on the controlling aspect or the competence information aspect of the reward. Because extrinsic rewards can have both controlling and competence information, it should be possible to cause either aspect to occur for the same reward. Therefore, when the extrinsic reward was used as a controlling aspect, the result was shown as a decreased interest in the activity. When the reward was used as a competence information aspect an increase in interest occurred. The study concluded that the evidence gathered supported Deci's cognitive evaluation theory.

Pallak, Suzanne R., Costomiris, Steven, Sroka, Susan, and Pittman, Thane S. "School Experience, Reward Characteristics, and Intrinsic Motivation." Child Development 53 (1982): 1382-1391.

This experiment was conducted to examine the effect of prior experiences with rewards and motivation, and to compare previous investigations comparing verbal and symbolic rewards. Seventy-two five to seven year olds were chosen from four different schools. Two of the schools extensively used symbolic rewards and two used only praise to reward children. The study showed that intrinsic motivation was enhanced when receiving expected praise for those who attended the no symbolic reward schools. This group also showed a lack of interest when given the expected symbolic rewards. Those children who attended schools who gave symbolic rewards were use to marked achievement. This group also showed a greater interest in the activity after receiving an expected symbolic reward. Expected praise enhanced intrinsic motivation and unexpected praise did not. In conclusion, the intrinsic motivation is effected by how the child interpreted the rewards, which is also effected by prior school experience.

Ross, Michael. "Salience of Reward and Intrinsic Motivation." Journal of Personality and Social Psychology 32 (1975): 245-254.

This study examines the attribution theory, that task-contingent rewards are more harmful to intrinsic interest than non-contingent rewards. Two experiments were conducted using pre-school children. In the first experiment one group was told they would receive a prize for playing a drum at the end of time, but was not told the nature of the prize. In group two the subjects had the prize in a box placed in front of them during the activity. A control group with no prize was also used. The results suggested that when subjects receive a salient-reward they are less interested in the activity during free play and their performance was reduced. When re-tested one month later the same results occurred. In one condition subjects were asked to think about the reward during the activity and the second group was distracted away from the reward. In experiment two a different reward was used and the manipulation of the subjects attention from the reward was attempted. The results showed that the distraction condition increased the interest in the activity during free-play. In conclusion Ross stated that the impact of the reward depended on the subject's prior knowledge of obtaining the reward. Therefore, the more salient the reward the more the subject focuses on the reward instead of the activity, the less intrinsic interest in the activity was displayed.

SUGGESTIONS FOR CLASSROOM TEACHERS

Brawer, Michael P. Integrating Motivational Activities into Instruction: A Developmental Model. Educational Resources Information Center, ED 216 106, Florida V-TECS, Department of Education, Tallahassee, Florida (April, 1982): 16.

Brawer suggested in his paper that many motivational problems in the classroom would be overcome by the instructors careful planning of the lessons. He felt that lessons were motivating if they focused on the need of the learner. Brawer listed four basic steps to aid the instructor in selecting the appropriate motivational activities. They are as follows: 1) determine the media needs of the learners, 2) examine the learners prior instruction (Is remediation needed?), 3) look at the feasibility of that activity within the classroom, and 4) select the motivational activities that best fit the needs of the learners. Brawer believes that this process would facilitate learning and increase one's intrinsic desire.

Brophy, Jere E., et al. Relationships between Teachers' Presentations of Classroom Tasks and Students' Engagement in Those Tasks. Educational Resources Information Center, ED 221 529, Michigan State University, East Lansing, Institute for Research on Teaching (June, 1982): 21.

This study was developed to analyze the students' involvement in classroom tasks with relation to the teachers introductory statements. Tests were developed to see if the teachers expectations influenced the students degree of involvement. Presentation statements of six teachers of two fourth, two fifth and two sixth-grade reading and math classes were recorded and analyzed. It was expected that involvement would be the highest after positive expectation statements and lowest after negative teacher statements. The results of the study showed that student involvement was higher when the teachers gave no introductory remarks and moved directly into the task. It was also suggested that more research is needed in order to support these findings.

Cannella, Gaile. "Praise and Concrete Rewards: Concerns for Childhood Education." Childhood Education 2 (March-April 1986): 300-301.

This article discussed the concerns of giving praise and rewards to students. Rewards were said to cause an individual to become less motivated because it conveys the message that the task is not worthwhile or enjoyable by itself. A study was conducted with two groups of children, one rewarded and one not rewarded, for completing an intrinsically interesting task. Those rewarded chose to spend less time on the original task. Thus, providing rewards for an interesting learning activity appeared to reduce motivation. The use of praise generally enhanced learning motivation, but high-praise classrooms viewed teachers as the authority and therefore looked to authority rather than logic to solve problems. Also included in this article were six other means of enhancing intrinsic learning motivation and increasing independence. 1) Incorporate student choice into learning activies. 2) Give students choice in social-control. 3) Be honest. 4) Give praise upon performance. 5) Analyze the environment around the child. 6) Assist children with individual goals. Cannella concluded that if these steps were followed they would lead to improved student motivation.

Carlson, Nancy A. "General Principles of Learning and Motivation." Teaching Exceptional Children 12 (Winter, 1980): 60-62.

The purpose of Carlsons' article was to provide a step by step plan to aid in developing an instruction plan that would provide the most possible learning. These steps include: 1) provide meaningfulness--relate to student's interests when possible, 2) make sure students have the correct prerequisite skills to succeed in the task, 3) provide a performance model to watch and imitate, 4) establish open communication--make sure they have clear directions, 5) use variety in your presentations, make it unusual and creative, 6) use active appropriate practice to reach an instructional ofjective, 7) practice skills for short periods over time, 8) when using instructional prompts, withdraw them gradually, and 9) provide pleasant conditions and consequences with an adequate amount of positive feedback.

Cohen, Margaret W. "Research on Motivation: New Content for the Teacher Preparation Curriculum." Journal of Teacher Education 37 (May-June, 1986): 23-28.

The purpose of this article was to review literature on intrinsic motivation and what approaches have the most direct application to the classroom setting. The attribution theory research involved teaching children how to improve their performance by changing their attributions from uncontrollable factors (ability) to controllable factors (effort). Teachers must alter their feedback so it includes information about their efforts. Cohen also examined the problems dealing with the uses of rewards. Research showed rewards can be motivating if they are used in an informative way and not in a controlling way. It was found that teachers with an informing atmosphere created children who were more intrinsically motivated and had a higher self-esteem than children taught by teachers with a controlling classroom setting. It was suggested that teachers act as models for their students, but in order to do that, they must first understand how the concept of motivation relates to themselves before they can apply it to others.

Deci, Edward L., and Ryan, Richard M. Curiosity and Self-directed Learning: The Role of Motivation in Education. Educational Resources Information Center, ED 206 377, ERIC Clearinghouse on Elementary and Early Childhood Education, Urbana, Illinois (1981): 24.

In this study Deci refered to many different research findings concerning children's motivation to learn. Deci discussed the problems of teacher and student interactions with regard to promoting intrinsically motivated learning. He refered to his study of thirty-five fourth through sixth graders to compare student perceptions in classrooms where teachers were control-oriented verses teachers who were autonomy-oriented. Teachers who were control oriented were predicted to have children with lower intrinsic motivation than teachers who were autonomy oriented. The results supported the prediction. Special emphasis was given to additional studies revealed: 1) effect of rewards and communication on intrinsic motivation to be dependent on whether they were viewed as primarily informational or controlling, and 2) differences in achievement and motivation between active and passive learners. Finally, Deci discussed the working conditions that undermined the teacher's intrinsic motivation and the problems associated with creating classrooms that enhance intrinsic motivation. It was suggested that the teacher give students choices about their learning. When teachers were more intrinsically motivated they would be more supportive of the children and in turn the students would tend to be more intrinsically motivated.

Gibbs, Graham., et al. Understanding Why Students Don't Learn. Educational Resource Information Center, ED 189 982, The Open University, Walton, Bletchley, Bucks, Institute of Educational Technology (July, 1979): 25.

This paper examined and discussed five explanations for students not learning. The following explantions were examined: 1) students lack the necessary study skills, 2) students are of different types and some have limited learning approaches, 3) students choose ineffective or inappropriate approaches to study, 4) some students are less developed in their knowledge as learners, and 5) students are held back in their learning. It was suggested that the instructors help students gain a better understanding of the learning process and introduce students to a variety of study methods that they can use. Gibbs concluded that students will be motivated as they begin to achieve success.

Gottfried, Adele Eskeles. "Relationships Between Academic Intrinsic Motivation and Anxiety In Children and Young Adolescents." Journal of School Psychology 20 (Fall, 1982): 205-215.

One hundred and forty-one fourth and seventh grade students were asked to respond to two self-support inventories. One inventory measured the academic intrinsic motivation while the other measured the students academic anxiety levels. Both inventories were divided into four subject areas, reading, math, social studies and science. The results of the inventories showed a negative relationship between the extrinsic motivation and anxiety. It was also suggested that classroom teachers should try to enhance their student's academic intrinsic motivation and reduce their academic anxiety. Intervention for high anxiety and low intrinsic motivation is necessary, although all children may benefit from such an approach. No specific suggestions were cited for the intervention process.

Ireton, Elmer J., and McDonald, Xene. "Motivation in the Modern Classroom." Clearing House 52 (March, 1979): 317-321.

This article discussed the following: 1) factors responsible for the lack of motivation, 2) implications for the classroom teacher, 3) relevance of motivational theories, and 4) current trends in motivation. Ireton encouraged the classroom teacher to use the small things to motivate students. The use of a smile, a pat on the head, comfort and support were all some children needed in order to be intrinsically motivated. The author suggested that we put the responsibility for the childs actions back to the child and not on the teacher. Children need time to design and solve their own problems and seek goals that are meaningful to them. It is therefore important for the teacher to create individualized learning with total student involvement and to provide help to students when they are setting goals.

Parkay, Forrest W. A Person-Centered, Inquiry Oriented Approach to Teaching Basic Skills. Education Resources Information Center, ED 206 612, Southwest Texas State University (1978): 14.

Parkay discussed ways for teachers to create conditions for students to learn basic skills. "Teachers should facilitate interpersonal situations that would encourage learning" (1). The teacher can make decisions about his/her own behavior which allows the students to become more confident and motivated to try new learning opportunities. Three suggestions were given by Parkay for a teacher to model. They were: 1) establish positive relationships with students, 2) model and encourage students to think thoughtfully and carefully on any subject and, 3) demonstrate to students how thinking and acquiring knowledge are relevant to their lives. It was also suggested that teachers promote personal and group goals. Mutually agreed upon projects were more meaningful for students and acted as a motivational tool for positive class activities.

Schunk, Dale H. Applying Motivation Theories to Individual Differences in the Classroom: A Social Learning Perspective. Educational Resources Information Center, ED 185 052. Paper presented at the Annual Meeting of the Southwest Educational Research Association, San Antonio, Texas (February, 1980): 10.

This paper by Schunk stressed the need for teachers to help students learn how to judge their own capabilities. There are two cognitively based sources of motivation according to the social learning theory. One source comes from the ability to perceive future consequences into the present situation. The second source is the ability to compare the desired performance with one's capability to perform. Students who set desired goals were motivated to accomplish their goals. The teacher must help set goals that are attainable for that individual student. The teacher must also focus on the individuals strength and weaknesses by giving positive feedback and monitoring their progress. Accuracy of self-perception is important in the development of motivation.

Slavin, Robert E. "Developmental and Motivational Perspectives on Cooperative Learning: A Reconciliation." Child Development 58 (October 1987): 1161-1167.

This article researched cooperative learning strategies done from two perspectives, developmental and motivational. Many studies showed that the developmental perspective on cooperative learning led itself to improved student achievement. Students learned from one another and a higher understanding occurred. Developmentalists focused on the quality of interaction, motivationalists were more concerned with the reward for which the group operated. The only way a group member can reach his/her personal goals is by the group succeeding. Therefore, group members helped each other succeed in order to attain the group reward. Group rewards provided incentives to help all group members succeed. High-quality assistance increases student achievement.

Stringer, Bobbi PHe, and Hurt, Thomas H. To Praise or Not to Praise: Factors to Consider before Utilizing Praise as a Reinforcer Device in the Classroom Communication Process. Educational Resources Information Center, ED 202 054, Paper presented at the Annual Meeting of the Southern Speech Communication Association, Austin, Texas (April, 1981): 17.

Stringer listed eight generalizations about praise that have been suggested by research. The following are the generalizations which showed praise as a positive reinforcer for the classroom. 1) Some form of attention, either praise or criticism is more effective in reinforcing student achievement than is ignoring. 2) Positive verbal reinforcement generally leads to improved achievement. 3) Praise can result in improved achievement, but only when it is congruent with student needs. 4) Praise is effective and not detrimental to students intrinsic motivation when used as informational feedback. 5) Verbal praise reinforces appropriate behavior. The following are the negative aspects of praise as a reinforcer. 1) Incongruent praise can inhibit student motivation. 2) Inappropriate classroom behavior can best be controlled by ignoring rather than punishing. 3) Extrinsic rewards lessen intrinsic motivation. In conclusion, Stringer stated that praise can be used as an effective communication tool for improving performance academically. The teacher must look at the positive and negative effects and be responsible for administering praise so it best serves the interest of the students individual needs, thereby encouraging involvement.

SUMMARY

The classroom teacher serves as one with strong input on students' motivation. In order to promote motivation, "Teachers in any educational setting must understand how the concepts of motivation relate to themselves before applying them to others" (Cohen 26). The classroom teacher also needs to understand fully the concepts of intrinsic and extrinsic motivation, and how and if they reflect on each other.

The use of rewards play an essential role in the classroom. According to Karniol and Ross (1186), rewards are very powerful tools for the classroom teacher. They also state that the negative effects of rewards were quite limited to a narrow set of circumstances. In the studies conducted by Reiss and Sushinsky (1123), no evidence had been produced showing any harmful side effects of using tangible rewards as a reinforcement procedure. McCullers and Martin (836) stated that better performance was associated with high-value incentives. They also described verbal approval as a strong reinforcer. Along with the idea of verbal approval, Workman and Williams (146), assert that a combination of praise and tangible rewards produce and maintain intrinsic interest in the classroom.

Contrary to those ideas, Deci (105) strongly contends that tangible rewards decrease intrinsic motivation. Extrinsic rewards cause students to be distracted from the task they are working on. With the absence of rewards, states Kruglanski (614), a higher quality of task performance and motivation is possible. With the use of monetary rewards as a reinforcer, it has been found by Shapira (1241) that students chose the easy task to insure their chances of getting the monetary reward. Students (in the same study) that were intrinsically motivated for the same task, chose the more difficult task. Deci (107) suggests that when money is used as an external reward it implies to the student that this activity probably should not be rendered without pay, that is, they feel that they should not be intrinsically motivated to perform this activity.

Danner and Lonky (1043) suggest that rewards used for highly motivated children lead to a decrease in motivation. It was also found not to be detrimental to those with initially low motivation. The more controlling the tangible reward, according to Dollinger (1268), the more detrimental effect there was on intrinsic motivation. Harter (797) further asserts that the less the children are directed toward an external reward or consequence of their performance, the less likely their intrinsic interest will suffer.

Children begin in the lower grades with a high intrinsic interest in learning. As they become older a shift is made toward extrinsic orientation reports Pearlman (542). This

report is consistent with the interpretations in Harter's findings, that external incentives have the effect of lowering one's level of motivation.

Children who expected and received an award showed a significant loss of intrinsic interest stated Greene and Lepper (1144). They also feel that there is a need to examine the long-term consequences of extrinsic rewards. Lepper and Greene (1973, 129) have also established and tested the "overjustification hypothesis" that one's intrinsic interest decreases when one is introduced to an extrinsic goal for a particular activity. Extrinsic incentives undermine children's intrinsic interest in an activity.

This research takes yet another turn, in that the determination of whether rewards increase or decrease intrinsic interest depends on the use of the rewards. Calder and Straw (603) conclude that the manipulation of the reward can control the level of interest in a task because of the interaction between intrinsic and extrinsic motivation. In order for a reward to enhance a students interest in the task, Bates (561) reports that the reward must be contingent on the performance of the task, not just on the participation of the task. Bates also suggests that the use of rewards be brief and used with caution. More research should be conducted using a wider variety of dependent measures.

It is pointed out by Pollak (1387) that children's prior experiences with rewards cause different reactions to rewards. When children are not accustomed to rewards, an undermining effect took place. Children with prior experience who received expected rewards displayed an increase in interest.

In order for the reward not to effect the students interest level, Condry (462) reports that timing of the reward is the key. Unexpected rewards show an increase in students interest level, whereas, expected rewards cause a decrease in interest. When students are offered a reward prior to undertaking the task it appears not only to lower future interest in the task, but also to lower the quality of the students performance on the task at hand. It was also suggested by Lepper, Greene, and Nisbett (129) that when the reward is given unexpectedly after the task, it does not affect interest in the task because the initial performance cannot be attributed to the unanticipated reward.

Deci (10) reports that rewards undermine intrinsic motivation and self-esteem when they are administered by someone who is control-oriented. If the reward is administered, however, by someone who is autonomy oriented, the opposite effect occurs. Because extrinsic rewards contain both controlling and competence information aspects, states Enzle and Ross (590), it should be possible to cause either aspect of interest to occur for the same reward. High-value rewards lead to a feeling of competence. Ross (252) argues that intrinsic

interest decreases if the reward used is highly salient, because it is looked at as being a controlling aspect. It also serves as a distraction toward the task. Deci (10) further states that control-oriented teachers use rewards controllingly and autonomy-oriented teachers use rewards informationally. Teachers orientation toward control or autonomy has a definite affect on the children. It appears that the autonomy-oriented teacher facilitates a more personal responsibility and internal control, which has a strong impact on children's intrinsic motivation and self-esteem.

Research suggests that the use of praise can have a strong effect on students learning. Praise can be an extrinsic form of reinforcement in the classroom. Barnes (561) stresses that if tangible rewards are used that they should be accompanied by praise. If praise is used it will lead to an easier withdrawal of tangible rewards. Pallak (1383) asserts that positive feedback emphasizes the informational aspect of rewards and therefore enhances intrinsic motivation. Deci (105) contends that when verbal reinforcement and positive feedback are used the result is an increase in intrinsic motivation. Praise is the only reward that enhances intrinsic motivation. Butler and Nisan (215) reported that written comments were preferred by students as feedback, but grades were perceived by most as better than no feedback. Students that were given grades tended to choose an easier task in order to insure receiving a

better grade. Therefore the availability and the nature of feedback influences whether interest in an activity or learning is maintained or undermined.

Many valid suggestions for the classroom teacher were made by several authors. Brawer (2) states that materials do not cause learning, they facilitate it. The use of rewards should be structured so they are informational rather than controlling (Deci 14). Teachers need to let their students fail, because it allows them to choose to succeed, if we make them succeed they are not able to take the responsibility for success. Teachers should use a holistic approach in their classrooms in order to develop all the necessary elements needed to facilitate learning. This approach would increase one's intrinsic desire to learn overall. He also suggests that teachers should examine the problem of motivation, identify student characteristics, and carefully plan lessons in order to create a maximum learning atmosphere (Brawer 10). Goal-setting is also an important device for teachers to incorporate into his/her classroom, states Schunk (4). Goal-setting is a positive link to increasing motivation.

Modeling by the teacher is an important aspect of inspiring students to be intrinsically motivated to learn. "The goal of having intrinsically motivated children seems best achieved when teachers themselves are intrinsically motivated, when they are excited, involved, self-directed, and trying new things" (Deci and Ryan 17). Schunk (4) also agrees with the

idea of teacher modeling. He feels it provides students with valid performance information. Along with teacher modeling, Cohen (26) states that teachers must also understand the dynamics of motivation. By acting as a model for students, teachers can open up communication with his/her students, recommends Carlson (61). Parkay (2) encourages student-teacher involvement. Promoting self-esteem is important in increasing motivation, and Parkay suggests that classroom teachers should limit the use of competition. Anxiety must also be kept to a minimum in order for students to improve motivation stresses Gottfried (213).

The use of praise is encouraged by Stringer (17). Praise is an important tool, if used effectively. When praise is used as informational feedback, it is effective and not detrimental to the students intrinsic motivation. Low achievers have been shown to learn more successfully after receiving praise.

Individualizing instruction needs to be attempted by the classroom teachers in order to improve motivation according to Ireton and McDonald (321). Slavin (1161) encourages the use of cooperative learning because it enhances student achievement which in turn enhances motivation. Interaction among students helps to improve student achievement. Barnes (12) states that group rewards create pressure among the group members, which in turn creates group productivity. It also promotes sharing of resources and ideas.

It is very difficult for today's classroom teacher to know what type of reinforcement should be incorporated into his/her classroom. Knowing when and when not to use a reinforcement is a difficult decision. Cohen (25) suggests that a teachers best mechanism for knowing when to use rewards is observation.

CONCLUSION

What are the positive effects of rewards?

Some research suggests that the use of external tangible rewards can be extremely beneficial to the classroom teacher. This idea however, seems to have few research authors who agree that the use of rewards will not cause a decrease in intrinsic motivation. The authors who do agree tend to suggest that informational feedback or praise is more beneficial than tangible rewards. It was also suggested by them, that further research is needed.

What are the negative effects of rewards?

Several research authors strongly feel that tangible rewards decrease intrinsic motivation towards a task. Tangible rewards only serve as a distraction to the task at hand. It also reduces the natural desire to want to do a particular task because some students felt as if the task was unimportant. When rewards are taken away the students have no desire to participate in the task any longer. With todays materialistic society it has become difficult to find a tangible reward that is highly motivational.

Can teachers manipulate rewards to make them more effect?

Research contends that the timing and the manipulation of tangible rewards determine the effect on ones' intrinsic motivation. Most authors tend to agree with this idea, but favor the limited use of rewards. If rewards are used when a student is already intrinsically motivated then giving him a reward for the activity is nonproductive. However, if a student is not motivated to an activity, then the use of a reward is productive to the students learning process. Rewards are effective if they are contingent on the performance of the task and not just on the participation of the task. Timing of the reward was also an important aspect to consider before using them. It was concluded that the more desired effect is gained when the reward is not expected. When the reward is expected it causes the student to be distracted. There seems to be many differing opinions on the use of rewards, but a general concensus is that: 1) intrinsic and extrinsic motivation interact, 2) when tangible rewards are used they should be accompanied by praise, 3) praise is generally more effect than tangible rewards, 4) the use of rewards should be structured so they are informational rather than controlling, and 5) rewards are more effective when low motivation levels already exist. 6) only use rewards when absolutely necessary.

Suggestions for the classroom teacher.

Research suggests that the classroom teachers should be aware of how motivation relates to themselves before they apply it to others (Cohen 26). When the teacher is intrinsically motivated he/she produces excitement and envolvement within the classroom. The use of tangible rewards needs to be limited. Research suggested that they be used with caution over a short period of time. Extrinsic rewards seem to be more beneficial to those who are low achievers. This modeling is important in encouraging students to be intrinsically motivated. Verbal praise and feedback were suggested by authors whether they were for the use of extrinsic or intrinsic motivation. These types of motivational devices can be intrinsic or extrinsic depending on its use. The planning of highly motivational activities and activities geared to individual students could possibly be all the motivation necessary to encourage student learning.

RECOMMENDATIONS

It is recommended that the classroom teacher should:

1) Model those qualities she/he seeks in her/his students.
2) Provide a classroom that is pleasant and has an atmosphere conducive to motivating all students to learn.
3) Create an opportunity for all students to be able to succeed.
4) Carefully plan lessons---make them meaningful to all students.
5) Open communication with students---help them set goals.
6) Use tangible rewards with caution and withdraw them gradually.
7) Incorporate verbal praise in every lesson.
8) Give students immediate feedback to all tasks.
9) Give students choices---don't be controlling.

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